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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,446	05/08/2006	Augusto Nascetti	DE 030379	7014
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			EXAMINER	
			FANG, PAKEE	
			ART UNIT	PAPER NUMBER
			4146	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/578,446

Applicant(s)

NASCETTI ET AL.

Examiner

PAKEE FANG

Art Unit

4146

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/08/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. **Claims 1 – 11 are presented for examination.**

Priority

2. Acknowledgment is made of applicant's claim for foreign priority & domestic priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the application filed on 05/08/2006.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “101” and “201” have been used to designate “pixels”, “electronic units” and “detector elements” on Figs 2 & 4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f).
A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a

separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.
4. The specification of the disclosure is objected to because the specification lacks section headings for the content of specification as illustrated above. Correction is required. See MPEP § 608.01(b).
5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract should be on a separate sheet containing only a single paragraph. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 9 & 11 are rejected under 35 U.S.C. 102(b) as being unpatentable over Uchino et al. (US Pub. 20030038795 A1).

In regard to claim 1, Uchino discloses (Fig. 1) an array arrangement comprising at least one group of electronic units (Item 11);

and comprising an addressing circuit via which an activation signal can be sequentially fed to the units of the group (Uchino; Fig. 1, item 15),

wherein the addressing circuit contains the following components (Uchino; Fig. 5),

a) driver units (Uchino; Fig. 5, Items, 21-1 : 21-4) that are each disposed adjacently to an electronic unit and connected to it, See the shift registers are adjacent to the pixels and are connected.

wherein every driver unit has at least one connection input and at least one connection output and is designed to receive a trigger signal applied to the connection input (Uchino; Fig. 5, Items, 21-1:21-4; [0074])

and, after receipt thereof, to deliver an activation signal for a certain time duration to the associated electronic unit, and also to pass the trigger signal to the connection output; (Uchino; Fig. 5 & 7; Items Vs1:Vs4; [0055] & [0074])

b) connecting lines that link the connection inputs and connection outputs of the driver units serially to one another. (Uchino; Fig. 5; Item HST; [0023]) – for connection lines that link the input and outputs of the shift register serially to one another.

In regard to claim 2, characterized in that the driver units are connected to additional lines, preferably to a clock line for transmitting a clock signal, to an enable line for controlling the time duration of the activation signal, (Uchino; Fig. 5; Item HCK; HCKX; [0023] & [0054 – 0055]) and/or to at least one line for supplying at least one control voltage serving as an activation signal (Uchino; Fig. 5; Item Cs; [0067]).

In regard to claim 3, characterized in that the electronic units are disposed two-dimensionally in a regular pattern (Uchino; Figs. 1 & 5)

In regard to claim 4, characterized in that it contains a plurality of equally large groups in which the electronic units are each disposed in a similar way. (Uchino; Fig. 5; Item 11) – for equally large groups of pixel (item 11) connected to the shift registers in a similar way.

In regard to claim 5, characterized in that the electronic units of a group are disposed linearly or in block fashion, (Uchino; Fig. 5; Item 11 & 15) – for the pixels groups are in a block or linear fashion.

In regard to claim 6, characterized in that the electronic units of a group are sensor elements, in particular radiation sensors, connected to a read-out line (Uchino; Fig. 5; Item 11; [0065 - 0069]) – for the pixels sensors connected to at least one read-out line.

In regard to claim 7, characterized in that the electronic units are active light radiators or light switches, (Uchino; Fig. 5; Item 11; [0065 - 0069]) – for the pixels that emits light.

In regard to claim 8, characterized in that the driver units contain at least one shift register, (Uchino; Fig. 5; Item 21) – for shift registers.

In regard to claim 9, characterized in that it is implemented as an integrated circuit, in particular in silicon technology; The examiner takes official notice it's well known in the art at the time of invention to use silicon technology in thin film transistor in a display device. (Uchino; Fig. 5; [0065]) for thin film transistor technology. "...active matrix liquid crystal display apparatus generally uses a thin film transistor (TFT) as a switching element of each pixel."

For reference where silicon application is used a TFT please see:

J. Appl. Phys. 75, 3235 (1994); DOI:10.1063/1.356131; Issue Date: 1 April 1994

or visit

<http://link.aip.org/link/?JAPIAU/75/3235/1>

Received 28 May 1993; accepted 22 November 1993

In regard to claim 11, a display device containing an array arrangement of active light radiators or light switches as electronic units, the array arrangement being configured as claimed in claim 1. (Uchino; Fig. 5; [0022 – 0023])

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchino et al. (US Pub. 20030038795 A1) in view of Applicant Admitted Prior Art (AAPA).

In regard to claim 10, a radiation detector, in particular an X-ray detector, containing an array arrangement of sensor elements as electronic units, the array arrangement being configured as claimed in claim 1; Uchino discloses all the limitation of claim 1 which the limitation of claim 10 depends on, but fails to disclose an X-ray detector. However, according to applicant's admitted prior art "arrangements of spatially two-dimensionally or three-dimensionally distributed electronic components are to be found in various electronic systems. They include, for example, matrix displays having active light-emitting elements or CCD chips of digital cameras. Flat dynamic X-ray detectors (FDXD) in which sensitive detector elements (pixels) that are sensitive to light or X-rays are arranged in a distributed manner in one plane (cf. for example, EP 434 154, EP 440 282) will be considered below as representative." ([0002]) the applicant also discloses a similar system on Fig. 1. Since, Uchino and AAPA inventions are analogous arts addressing a light emitting system. Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention to combine system components of Uchino with the X-ray system of AAPA to make the system more flexible to emit and detect different wave-

length of light from the screen; therefore, enhance the usage capability of the light emitter screen.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAKEE FANG whose telephone number is (571)270-7219. The examiner can normally be reached on Monday-Friday 9AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patel Ramesh can be reached on (571)272-3688. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAKEE FANG/

Examiner, Art Unit 4146

Art Unit: 4146

/Ramesh B. Patel/

Supervisory Patent Examiner, Art Unit 4146